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| 10/681,123 | 10/09/2003 | Michael Chen | 3722-0166P | 8070 |

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| EXAMINER | |
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| PACHOL, NICHOLAS C | |

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| 2609 | |

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

PTOL-90A (Rev. 04/07)

| | | |
|---|---|---|
| ***Office Action Summary*** | **Application No.**<br>10/681,123 | **Applicant(s)**<br>CHEN, MICHAEL |
| | **Examiner**<br>Nicholas C. Pachol | **Art Unit**<br>2609 |

***-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --***

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☐ Responsive to communication(s) filed on _____.
2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-20* is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *1-20* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.
10)☒ The drawing(s) filed on *09 October 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a)☒ All b)☐ Some * c)☐ None of:
1.☒ Certified copies of the priority documents have been received.
2.☐ Certified copies of the priority documents have been received in Application No. _____.
3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

## DETAILED ACTION

### *Claim Objections*

1. Claim 3 is objected to because of the following informalities: Claim 3 claims the dependency to Independent Claim 1 with the limitation "wherein the bottom clock signal is further transferred to the automatic document feeder." However, the limitation "bottom clock signal" is not recited in Independent Claim 1. The examiner will interpret Claim 3 as dependent on Claim 2, as best understood. Appropriate correction is required.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-3, 8, and 10-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Nonoyama (4,908,719).

Regarding Claim 1, Nonoyama teaches a flatbed scanner (Figure 1, element 1 where scanner is considered to be a flatbed scanner), which may be used in combination with an automatic document feeder (Figure 1, element 10) having a scan function to simultaneously scan a front side image and a back side image of a document (column 4, lines 3-6), the flatbed scanner comprising:

a bottom image-reading module for reading the front side image to obtain an analog front-side signal (Figure 2, element 5);

a bottom motor for moving the bottom image-reading module(Figure 2, element 66);

a bottom circuit for controlling the bottom image-reading module (figure 2, element 61) and converting the analog front-side signal into a digital front-side signal (figure 2, element 41); and

a bottom memory connected to the bottom circuit (figure 2, element 44), wherein the bottom circuit comprises a digital signal receiver for receiving a digital back-side signal (figure 2, element 64) , which corresponds to the back side image, from the automatic document feeder.

Regarding claim 2, Nonoyama further teaches wherein the bottom circuit further comprises:

a clock generator for generating a bottom clock signal to control the bottom image-reading module (Figure 2, element 62 and column 4, lines 57-59); and

an analog-to-digital converter (Figure 2, element 41) and an amplifier for converting and amplifying the analog front-side signal into the digital front-side signal, respectively (Column 4, lines 18-22).

Regarding claim 3, Nonoyama wherein the bottom clock signal is further transferred to the automatic document feeder (Figure 2, elements 62, 61, and 12, and column 4, lines 59-64).

Regarding Claim 8, Nonoyama teaches an automatic document feeder (Figure 1, element 10), which may be used in combination with a flatbed scanner to simultaneously scan a back side image and a front side image of a document (column 4, lines 3-6), the automatic document feeder comprising:
a top image-reading module for reading the back side image to obtain an analog back-side signal (Figure 2, element 21); a sheet-feeding mechanism for feeding the document (Column 3, lines 26-40); and a top circuit for receiving the analog back-side signal and converting the analog back-side signal into a digital back-side signal for output to the flatbed scanner (Figure 2, element 51).

Regarding Claim 10, Nonoyama wherein the top circuit comprises:
an analog-to-digital converter for converting the analog back-side signal into the digital back-side signal (Figure 2, element 51).

Regarding Claim 11, Nonoyama further teaches the automatic document feeder further comprising a top memory connected to the top circuit (Figure 2, element 55), wherein the top circuit comprises an analog-to-digital converter for converting the analog back-side signal into the digital back-side signal analog-to-digital converter (Figure 2, element 51) and an amplifier for converting and amplifying the analog back-side signal into the digital back-side signal, respectively (Column 4, lines 41-43).

Regarding Claim 12, Nonoyama further teaches wherein the top circuit comprises: a clock generator for generating a top clock signal to control the top image-reading module (Figure 2, element 62 and column 4, lines 57-59); and an analog-to-digital converter for converting the analog back-side signal into the digital back-side signal (Figure 2, element 51).

Regarding Claim 13, Nonoyama further teaches wherein the top circuit comprises: a clock generator for generating a top clock signal to control the top image-reading module (Figure 2, element 62 and column 4, lines 57-59); and an analog-to-digital converter (Figure 2, element 51) and an amplifier for converting and amplifying the analog back-side signal into the digital back-side signal, respectively (Column 4, lines 41-43).

Regarding Claim 14, Nonoyama teaches a duplex scanner (examiner interprets a duplex scanner as a scanner that can scan both sides of a document) for simultaneously scanning a front side image and a back side image of a document (column 4, lines 3-6), the duplex scanner comprising: an automatic document feeder (Figure 1, element 10), comprising : a top image-reading module for reading the back side image to obtain an analog back-side signal( Figure 23, element 21); a sheet-feeding mechanism for feeding the document (Column 3, lines 26-40); and a top circuit for controlling the top image-reading module (Column 3 line 59 - column 4 line 2) and converting the analog back-side signal into a digital back-side signal for output (Figure

2, element 51); an a flatbed scanner Figure 1, element 1), comprising: a bottom image-reading module for reading the front side image to obtain an analog front-side signal; a bottom motor for moving the bottom image-reading module (Figure 2, element 5); a bottom circuit for receiving the analog front-side signal and converting the analog front-side signal into a digital front-side signal (Figure 2, element 41); and a bottom memory connected to the bottom circuit (Figure 2, element 44), wherein the bottom circuit comprises a digital signal receiver for receiving the digital back-side signal, which corresponds to the back side image, from the automatic document feeder (Figure 2, element 64).

Regarding Claim 15, Nonoyama further teaches wherein the top circuit comprises an analog-to-digital converter for converting the analog back-side signal into the digital back-side signal (Figure 2, element 51), and the bottom circuit further comprises: a clock generator for generating a bottom clock signal to control the bottom image-reading module and the top image-reading module (Figure 2, element 62); and an analog-to-digital converter (Figure 2, element 41) and an amplifier for converting and amplifying the analog front-side signal into the digital front-side signal, respectively, and the amplifier further amplifying the digital back-side signal (Column 4, lines 18-22).

Regarding Claim 16, Nonoyama further teaches The duplex scanner according to claim 14, wherein: the automatic document feeder further comprises a top memory connected to the top circuit (Figure 2 element 55); the top circuit comprises an analog-to-digital converter (Figure 2 element 51) and an amplifier for converting and amplifying the analog back-side signal into the digital back-side signal (Column 4, lines 41-43), respectively; and the bottom circuit comprises: a clock generator for generating a bottom clock signal to control the bottom image-reading module and the top image-reading module (Figure 2, element 62); and an analog-to-digital converter (Figure 2, element 41) and an amplifier for converting and amplifying the analog front-side signal into the digital front-side signal, respectively (Column 4, lines 18-22).

Regarding Claim 17, Nonoyama further teaches the duplex scanner according to claim 14, wherein the top circuit comprises:

an analog-to-digital converter (Figure 2, element 51) and an amplifier for converting and amplifying the analog back-side signal into the digital back-side signal, respectively (Column 4, lines 41-43); and

a clock generator for generating a top clock signal to control the top image-reading module (Figure 2, element 62); and

the bottom circuit comprises:

a clock generator for generating a bottom clock signal to control the bottom image-reading module (Figure 2, element 62); and

an analog-to-digital converter (Figure 2, element 41) and an amplifier for converting and amplifying the analog front-side signal into the digital front-side signal, respectively (Column 4, lines 18-22).

Regarding Claim 18, Nonoyama further teaches the duplex scanner according to claim 17, wherein the automatic document feeder further comprises a top memory connected to the top circuit (Figure 2, element 55).

### *Claim Rejections - 35 USC § 103*

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 4-6, 9, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nonoyama in view of Muramatsu (US 5,444,554).

Regarding Claim 4, Nonoyama does not teach a flatbed scanner, further comprising a keyboard through which a user may control operations of the flatbed scanner.

Muramatsu does teach a flatbed scanner, further comprising a keyboard through which a user may control operations of the flatbed scanner (Fig 2, element OP and Column 8, lines 44-51), therefore it would have been obvious to one of ordinary skill in art at the time the invention was made to modify the teaching of Nonoyama with the teaching Muramatsu for the purpose of being able to have the option to perform various operations for scanning (Column 8, lines 44-51).

Regarding Claim 5, Nonoyama does not teach the flatbed scanner, further comprising a monitor for displaying a state of the flatbed scanner.

Muramatsu does teach the flatbed scanner, further comprising a monitor for displaying a state of the flatbed scanner (Figure 2, element 91 and column 8, lines 52-61), therefore it would have been obvious to one of ordinary skill in art at the time the invention was made to modify the teaching of Nonoyama with the teaching of Muramatsu for the purpose of displaying the various states of the apparatus and the operation modes of the apparatus (Column 8, lines 52-61).

Regarding Claims 6,9,19 and 20, as disclosed in claims 1,8, and 14, Nonoyama does not teach wherein the bottom image-reading module is a CCD module or a CIS module, wherein the bottom image-reading module is a CCD module or a CIS module, wherein each of the top image-reading modules is a CCD module or a CIS module, and wherein each of the bottom image-reading modules is a CCD module or a CIS module.

Muramatsu does teach wherein the bottom image-reading module is a CCD module or a CIS module, wherein the bottom image-reading module is a CCD module or a CIS module, wherein each of the top image-reading modules is a CCD module or a CIS module, and wherein each of the bottom image-reading modules is a CCD module or a CIS module (Column 4, lines 52-56, and the examiner treats a CIS module as being the same as a CCD module), therefore it would have been obvious to one of ordinary skill in art at the time the invention was made to modify the teaching of

Nonoyama with the teaching Muramatsu for the purpose of being able to scan a document (Column 4, lines 51-56).

6. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nonoyama in view of Hsich (US 6,791,720).

Regarding Claim 7, Nonoyama does not teach wherein the bottom circuit is an application specific integrated circuit (ASIC).

Hsich does teach wherein the bottom circuit is an application specific integrated circuit (ASIC) (Column 1, Lines 41-49), therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Nonoyama with the teaching of Hsich for the purpose of controlling the scanning apparatus (Column 1, lines 45-47).

## ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nicholas C. Pachol whose telephone number is 571-270-3433. The examiner can normally be reached on M-F , Alternate Friday off, 7:30 a.m.-5 p.m. (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hai Tran can be reached on 571-272-7305. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

N.P.
07/17/07

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PRIMARY EXAMINER